

In re Application of:  
Rheins and Morhenn  
Application No.: 09/375,609  
Filed: August, 17, 1999  
Exhibit I - Page 1

PATENT  
Attorney Docket No.: DERM1100-1

**EXHIBIT I**

**CURRICULUM VITAE OF DR. GERALD G. KRUEGER**

## CURRICULUM VITAE

### PERSONAL DATA

Name: Gerald G. Krueger, MD  
Birth date: March 28, 1940  
Birthplace: Melville, North Dakota  
Citizenship: United States  
SSN#: 501-42-4648

### CURRENT TITLE

Professor, Cumming Presidential Endowed Chair, Department of Dermatology,  
University of Utah Health Sciences Center, Salt Lake City, Utah

### ADDRESS

University of Utah  
Department of Dermatology  
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email = krueger@derm.med.utah.edu

### EDUCATION

- Baccalaureate Degree: 1962, Union College, Lincoln, Nebraska - Chemistry
- Advanced Degree: 1966, Loma Linda University of Medicine, Loma Linda, California - Doctor of Medicine
- Internship: 1966-67, Fitzsimons General Hospital, Denver, Colorado (rotating internship)
- Residency: 1969-72, University of Colorado Medical Center, Denver, Colorado - Dermatology
- 1970-71, Course work in immunology at University of Colorado, Denver, Colorado
- Board Certification: 1973, Dermatology

### MEDICAL LICENSURE

- California -- inactive
- Colorado -- inactive
- North Carolina -- inactive
- Utah -- active -- license #72-153996-1205

### HONORS:

- Alpha Omega Alpha,

- Taub International Award for Psoriasis Research, 1984
- Listing in "The Best Doctors in America"
- First Edition 1990, Second Edition 1994
- National Psoriasis Foundation -- Lifetime Achievement Award 1993
- American Skin Association " The 1998 Psoriasis Research Award"
- National Psoriasis Foundation 1998 Founders Award

## **PROFESSIONAL EXPERIENCE**

### **Military Service:**

- 1967-69, General Medical Officer, Fort Bragg, North Carolina, and Republic of Viet Nam. Promoted to Major in 1968 from secondary zone; honorable discharge, June 1972.

### **Editorial Experience:**

- Currently referee for: The Journal of Investigative Dermatology, Archives of Dermatology, Journal of the American Academy of Dermatology, and Journal of Clinical Investigation.
- Editorial Board of Skin Pharmacology (1987 to 1993)
- Associate Editor of The Journal of Investigative Dermatology (7/87 - 6/92)
- Assistant Editor of The Journal of Investigative Dermatology (7/92 - 6/97)
- Associate Editor of The Journal of Investigative Dermatology (7/97 - current)
- Editorial Board PsoriasisNet for the American Academy of Dermatology 6/00 - current)

## **RESEARCH SUPPORT**

### **Grants - Principal Investigator**

1. NIH Grant #2-PO1-AM15640, "Immunology of psoriasis" (Two subsections: Cell-mediated immunity and psoriasis; Artificial animal model of psoriasis), \$420,000 total direct costs, 5/1/75-4/30/78
2. NIH Grant #1-RO1-AM21405, "Psoriasis: Its genotype and pathogenesis: Model system," \$788,220 total direct costs, 9/30/78-3/31/89.
3. Letterman Army Institute of Research, "Studies in percutaneous absorption," \$25,472 total direct costs, 10-1-80 - 9-31-81.
4. US Army Grant DAMD17-82-C-2214, "Feasibility of human skin grafts on an isolated but accessible vascular supply on athymic rats as a system to study percutaneous penetration and cutaneous injury", \$550,000, 9/1/82-4/30/86.
5. Hoffmann-La Roche, Inc., Acne study using a nude mouse model," \$7500 total direct costs, 1981-83.
6. CIBA-GEIGY Pharmaceuticals, "Basics of percutaneous absorption and metabolism of agents applied to the rat-human flap model system," co-PI, \$125,000 total direct costs, 9/1/84-8/31/86.
7. NIH NO1 AI32510, "Comparison of three different interferon preparations in the intralesional treatment of condyloma acuminata," subcontract with University of Rochester, \$146,000 total direct costs, 2/1/85-7/31/86.
8. Royal Pharmaceuticals, "Study of triacantanol in guinea pig dermatitis," \$3000 total direct costs, 1-1-86 - 1-1-87.
9. Schering-Plough Corporation, "Development of an animal model to study the formation of calluses," \$13,889 total direct costs, 6-1-87 - 5-31-88.
10. The Upjohn Company, "A study to Determine the Feasibility of Using Human Scalp Grafts as a System to Study Drugs Which Effect Hair Growth," \$31,219 total direct costs, 7-1-87 - 9-30-89.

11. PHS AR 017-1046, "Tissue Culture Component for the Development of Prosthetic Replacement for the Urinary Tract," subcontract, Utah Biomedical Test Laboratories, \$9148 total direct costs, 2-1-89 - 6-14-89
12. NIH 1 RO1 CA48109-02, "Suppressor T-cell Manipulation as a Cancer Therapy". \$235,222 total direct costs, 9/1/88-8/31/91, 10% effort
13. NIH PO1 HD28528-01, "Use of genetically defined skin to treat disease," Role = Director/Principal Investigator 4/1/92-6/30/97 direct costs in year one = \$474,749; Total direct costs \$2,557,303
14. NIH PO1 HD28528-07, "Use of genetically defined skin to treat disease," Role = Director/Principal Investigator; Reviewed 4/98 --> score 1.7 percentile, 4 Projects 3 Cores; Award date 12/1/98; duration 12/1/98 - 11/31/03 direct costs in year one = \$813,000; Total direct costs \$4,316,327.

#### Grants - Co-investigator

1. NIH, "Antiviral substances in the treatment of herpes," 1975-77.
2. NIH, "Cyclic nucleotides and alveolar macrophage activation," 1976-79.
3. NIOSH RFP: 210-77-0027-000, "Study of the health effects of oil shale workers," 1977-79.
4. NIH, Grant RO1 AM/AI 33543: Ia antigens on epidermal cells: Their immunologic role, PI: LK Roberts, \$235,981 total direct costs, 5% effort, 1984-1989
5. DHHS/PHS Food & Drug Administration, #223-87-1801, "Development of Methods for Assessing Bioavailability of Topical Drug Products in Human Skin," PI: LK Pershing, 19% effort, \$560,000 total direct costs, 9-30-87 - 9-29-90.
6. NIH CA 50298-01 "Biology and Chemoprevention of Melanoma in Nevus Grafts".
7. total direct costs, 9/1/89 to 8/31/92, 8% effort.
8. DHHS/PHS Food & Drug Administration, #223-87-1801, "Development of Methods for Assessing Bioavailability of Topical Drug Products in Human Skin," PI: LK Pershing, 15% effort, 4/1/91 to 3/31/94; Total direct costs \$274,280.
9. NIH RO1 DA07820-01 "Disposition of drugs of abuse into hair" 4/1/92 to 3/31/96, direct costs in year one = \$244,384; Total direct costs \$999,038.
10. NIH via SBIR to Molecules for Health; Phase 1, Total direct costs ~\$9,600, 9/1/91 to 3/31/92.
11. NIH via SBIR to BioMarine Technologies Inc; Phase I, Total direct costs to U of Utah Dermatology ~\$9,600, 11/1/91 to 9/1/92.
12. NIH via SBIR to BioMarine Technologies Inc; Phase II, Total direct costs to U of Utah Dermatology ~\$34,000; 9/1/92 to 8/30/94.
13. NIH Hair analysis to monitor drug abuse treatment; PI Diana G Wilkins PhD; % effort for GGK = 5%; Year 1 budget = \$125,553; Total direct budget = \$535,397; 10/1/94 to 6/30/98.
14. NIH via Skin Disease Research Core Center Grant, Department of Dermatology University of Texas Southwestern, PI P Bergstresser, 5 P30 AR 41940-04; Seed grant, "Isolation and characterization of androgen-regulated and dermal papilla-specific genes expressed in cultured human dermal papilla cells", P.I. @ UTSW is MJ

- McPhaul; funding for 9 months, ends 5/30/96; total Univ of Utah funds, \$10,212, direct costs \$6831.
15. Renewed 6/1/96 through 5/31/97 total Univ of Utah funds, \$9,522, direct costs \$6,469.
  16. NIH RO1 DA07820-05 "Disposition of drugs of abuse into hair" 4/1/96 to 3/31/00, direct costs in year one = \$201,496; Total direct costs \$820,869.
  17. NIH via Skin Disease Research Core Center Grant, Department of Dermatology University of Texas Southwestern, PI P Bergstresser, 5 P30 AR 41940-05; Demonstration grant, included in renewal of Center Grant, " Isolation and characterization of androgen-regulated and dermal papilla-specific genes expressed in cultured human dermal papilla cells", P.I. @ UTSW is MJ McPhaul; funding 6/1/97 to 5/31/98.

#### **LABORATORY INVESTIGATIONS - PRINCIPAL INVESTIGATOR**

(1/1/92 to current)

18. Searle: Disposition of spironolactone in human skin oral vs. topical (1/1/92-12/31/92) total direct costs \$16,000.
19. Genta: Methotrexate - deposition in human skin oral vs. topical (9/1/92 - 2/1/93) \$12,863.
20. Genta: Anti-sense feasibility studies (9/1/92 - 11/1/93) \$85,822.  
renewed (12/1/93 - 11/30/94) \$89,000
21. Genta: Anti-sense to androgen receptor in hair follicles (2/1/94 - 1/31/95) \$116,000
22. Dermigen: Assessment of carcinogenic effect of topically applied petroleum middle distillates on human skin (11/30/91 to 12/31/97) \$48,700
23. Procter and Gamble (invited after pre-proposal) Isolation and characterization of androgen-regulated and dermal papilla-specific genes expressed in cultured human dermal papilla cells, PI MJ McPhaul, Co-PI GG Krueger, 5/1/97 to 4/30/99, \$50,000/year split between UTSW & U of U, the total includes indirect costs, negotiated @ 25%
24. Dermigen: Assessment of carcinogenic effect of topically applied petroleum middle distillates on human skin (9/1/97 to 6/30/98) total direct \$20,388, total \$30,484
25. Utah Psoriasis Initiative – Genotype predicts Phenotype, Physical Features to Response to Treatment. Initial funding Movitz Foundation, National Psoriasis. Foundation, DNA Sciences and GGK Development Fund, July 2002 to current
26. Development of a Treatment Assessment Tool for Psoriasis. Initial funding GGK Development Fund, September 2002 to current.

#### **CLINICAL DRUG STUDIES - PRINCIPAL INVESTIGATOR**

1. Hoffmann-La Roche, Inc., Retinoids in the treatment of psoriasis and disorders of keratinization, 1979-88, \$115,000 total direct costs.
2. Westwood Pharmaceuticals, Inc., Desquam-X Wash for acne, 1982, \$18,000 total direct costs.

3. Eli Lilly & Co., Benoxaprofen in the treatment of psoriasis, 11/83, \$59,000 total direct costs.
4. The Upjohn Company, Cleocin acne study, 1983, \$18,000 total direct costs.
5. Westwood Pharmaceuticals, Inc., Alpha Keri Bath Gel for treatment of dermatitis, 1984, \$9,250 total direct costs.
6. Hoechst-Roussel Pharmaceuticals, Inc., Prednicarbate in the treatment of psoriasis, 1984, \$20,000 total direct costs.
7. Schering Corporation, Interferon for the treatment of condyloma acuminata, 1984, \$41,500 total direct costs.
8. Syntex, Inc., Timobesone in the treatment of psoriasis, 1984, \$13,500 total direct costs.
9. McNeil Pharmaceuticals, Fenretinide in the treatment of psoriasis, 1984, \$15,000 total direct costs.
10. Hoechst-Roussel Pharmaceuticals, Inc., ATS in the treatment of acne, 1985, \$12,500 total direct costs.
11. Glaxo, Removate in the treatment of psoriasis, 1985, \$38,000 total direct costs.
12. Schering Corporation, Diprolene in the treatment of psoriasis, 1985, \$100,600 total direct costs.
13. Hoffmann-La Roche, Inc., RO 10-1670 in the treatment of psoriasis, 1986, \$43,750 total direct costs.
14. Interferon Sciences, Interferon in the treatment of genital herpes, 1986, \$43,000 total direct costs.
15. The Upjohn Company, Minoxidil in the treatment of male pattern baldness, 1986, \$155,500 total direct costs.
16. UltraThermics, Inc., Hyperthermia in the treatment of psoriasis, 1987, \$4,500 total direct costs.
17. Burroughs Wellcome Co., Acyclovir in the treatment of sun-induced herpes simplex labialis, 1987, \$44,900 total direct costs.
18. Pharmaco Dynamics Research Inc., Retin-A in the treatment of actinic keratoses, 1987, \$63,450 total direct costs.
19. Pharmaco Dynamics Research Inc., Retin-A in the treatment of actinic keratoses, Phase II, 1988, \$51,850 total direct costs.
20. Glaxo Inc., Fluticasone in the treatment of psoriasis, 1988, \$38,945 total direct costs.
21. Glaxo Inc., Temovate in the treatment of psoriasis, 1988, \$32,160 total direct costs.
22. Herbert Laboratories, Tretinoin vs. erythromycin in the treatment of acne, 1989, \$25,450 total direct costs.
23. Burroughs Wellcome Co., Piritrexim in the treatment of psoriasis, 1989, \$68,744 total direct costs.
24. Genderm Corporation, Capsaicin in the treatment of psoriasis, 1989, \$13,577 total direct costs.
25. Penederm Inc., Methotrexate in the treatment of psoriasis, 1989, \$54,750 total direct costs.

26. Sandoz; Psoriasis vs cyclosporine @ 4 mg/kg bid vs qd; 9/1/91-12/31/92 total direct costs \$109,381.
27. Hoechst Roussel; Psoriasis vs Dermatopp 10/10/90-6/1/91; total direct costs \$43,070
28. Herbert; Psoriasis vs AGN 9/1/90-12/31/90; total direct costs \$21,362.
29. Glaxo; Protocol FPS-301; 4/1/91-3/31/92; total direct costs \$28,474.
30. Iomed; Iontophoresis of Dexamethasone for psoriasis of nails; 3/31/91-6/30/92; total direct costs \$30,000.
31. Herbert-Allergan Protocol R168 111 7997, psoriasis vs AGN 190168; 9/1/91-7/31/92; total direct costs \$29,497.
32. Bristol-Meyers/Squibb; DE127-009 psoriasis vs calcipotriol; 3/1/92-9/1/92; total direct costs \$33,060.
33. Iomed; NAFT-01F-92 fungal disease of fingernails; 4/1/92-7/1/93; total direct costs \$43,870.
34. SmithKline Beecham; Topical Auranofin, 3 doses in the treatment of psoriasis; 2/15/93 - 9/1/93; total costs \$43,615.
35. Amgen Inc.; I.V. r-met hu interleukin 2 in severe psoriasis; 5/1/93 - 4/30/94; total costs \$56,069.
36. Herbert-Allergan, psoriasis vs AGN 190168 a two dose vs. placebo - pivotal study; 6/1/93 - 5/31/93; total costs \$72,891.
37. Galderma, Metrogel vs vehicle post clearing in acne rosacea, U9403 / Proj # 00-4602; 4/1/94 -6/1/95; total costs \$27,994.
38. SmithKline Beecham; Leukotriene receptor inhibitor (SB 201993) for the treatment of psoriasis; 9/1/94 - 8/30/95; total costs \$55,195.
39. Genta Inc; Hand eczema study comparing two forms of betamethasone; 5/1/94 - 3/1/95; total costs \$35,279.
40. Oclassen Pharmaceuticals; Cordran Tape vs Psoricon to treat psoriasis; 8/1/94-6/1/95; \$24,740.
41. Bristol Meyers Squibb, Vaccination with KLH and X174 to determine immune responsiveness in non-treated patients with psoriasis, 9/1/95 to 8/30/96, 5 patients, total costs \$25,755.
42. Allergan, A multi-center, open label, dose-response study designed to assess the safety and efficacy of AGN 192013/LGD1057, in doses ranging from 0.15 mg/kg to 1.5 mg/kg to patients with severe plaque psoriasis, 11/1/95 to 10/31/96, 15 patients; direct costs \$18,732 total costs \$34,705.
43. Allergan, Safety and efficacy of Retinoid 0.1% gel verses vehicle gel applied once every other day for up to 24 weeks in plaque psoriasis, 11/1/95 to 10/31/96, 36 patients; direct costs \$55,188, total costs \$70,344.
44. Allergan, Safety and efficacy of Retinoid 0.1% gel applied once daily for 8 weeks in the treatment of plaque psoriasis and the effect of Retinoid 0.1% gel during the first two weeks of treatment on molecular markers in treated plaques; 5/1/96 to 4/30/97, 20 patients; total costs \$34,698.



45. Merck Clinical Research, Protocol 002-00 L-733,725 to study a new immuno-suppressive in a dose response fashion, 1/1/96 to 12/31/96, 16 patients, total costs \$75,120.
46. Isis Pharmaceuticals, An open-labeled pilot study to evaluate the safety and efficacy of intravenous ISIS 2302 (ICAM-1 Antisense) in patients with mild to moderate plaque type psoriasis vulgaris, 10 patients 5/1/96 to 4/30/97, total costs \$95,120.
47. Bristol-Meyers Squibb, Protocol IM101-005 Dose ranging study of CTLA4-Ig to treat psoriasis, 10 patients, 3/1/97-6/30/98, total costs \$104,960.
48. Biogen, Protocol C96-703, Dose ranging study of LFA3tips to treat psoriasis, 10 patients, 5/1/97 - 8/31/98, total costs \$205,055.
49. Fujisawa USA Inc, Protocol 97-0-035, A phase III, randomized, double-blind study comparing topically applied tacrolimus ointment vs. vehicle ointment in adult patients with atopic dermatitis, 25 patients, 8/1/97 to 7/31/98;
50. Tap Holdings, Protocol M97-698, A multiple dose-response study of oral TAK-603 in patients with plaque psoriasis, 19 patients, 11/1/97 to 10/31/98, total budget \$43,978.
51. Allergan, Protocol 190168-017C-00 Multi-center, double-blind, randomized, vehicle-controlled study of the safety and efficacy of 0.025%, 0.05% and 0.1% tazarotene creams applied once daily for 12 weeks in the treatment of plaque psoriasis, 48 patients, 12/1/97 to 11/30/98, total budget \$85,281.
52. Biogen, Protocol C97-708, Dose ranging study of LFA-3/TIPS to treat psoriasis, 10 patients, 8/1/98 - 10/31/99, costs \$10,760/patient , total = \$107,600.
53. Abgenix, Protocol ABX-L8-9701, 8 patients, costs \$6568/patient, total = \$52,544.
54. XOMA Protocol HUAA255 for the treatment of severe alopecia areata 10/1/98-9/30/99, costs/patient \$6359, total for 6 patients \$38,154; (Cancelled 2/1/99).
55. Biogen Protocol C97-709 to test safety and pharmacokinetics of three routes of administration of LFA3TIP in patients with psoriasis, 11/1/98 -10/31/99, costs per patient \$13,739, total for 6 patients \$82,434.
56. TheraTech Protocol AF98010 to study fluconazole in tape to treat onychomycosis, 10/1/98 - 4/30/2000, costs/patient \$2182, total for 17 patients \$37,086.
57. Vertex Protocol VX98-497-101 A randomized, blinded, dose-ranging, safety, tolerability and preliminary efficacy trial with VX-497 in patients with severe chronic plaque-type psoriasis, 1/15/99 - 1/30/00, costs per patient \$9,826, total for 7 patients \$68,782.
58. Abgenix, Protocol ABX-L8-9802, A randomized, placebo controlled, multiple dose, dose-rising clinical trial of the safety and effectiveness of four dose levels of ABX-IL8 in patients with moderate to severe plaque psoriasis, 2/20/99 - 3/31/00, 10 patients, costs \$9,174/patient, total = \$91,740.
59. Fountain Pharmaceuticals Inc; IND 57,404, filed by G G Krueger; Comparison of the efficacy and safety of clobetasol proprionate in a liposome based vehicle vs. clobetasol proprionate in a cream -based vehicle in the treatment of patients with chronic plaque psoriasis, 2/1/99 - 3/31/00, 50 patients, costs per patient \$1,824, total = \$91,201.

60. Allergan, A multicenter, double-blind, vehicle-controlled, bilateral, paired-comparison study of the safety and efficacy of AGN 194310 0.01% ointment applied once daily for 4 weeks in the treatment of patients with plaque psoriasis; 4/1/99 to 5/30/00, 15 patients, costs/patient \$1,605, total costs \$24,075.
61. Connetics, A multicenter study of Clobetasol foam vs cream in psoriasis; Protocol CPCD.C004 11/1/99-10/31/2000, 27 patients, costs/pt \$1,345, total costs \$36,315.
62. Allergan, A multicenter trial of Tazorac for actinodermatosis, Protocol # AGN 190168-034C, 12/1/99-11/30/2001, 40 patients \$2109/ pt, total costs \$84,379.
63. Fujisawa USA Inc, Protocol 97-0-038, An open label, long term follow-up study to evaluate the safety of topically applied tacrolimus ointment for the treatment of atopic dermatitis, up to 25 patients, continued open study of patients on protocol 97-0-035, 4/1/98 to 12/31/2000; budget = \$20,400.
64. Fujisawa USA Inc, Protocol 99-0-054, An open-label study to evaluate the safety of topically applied tacrolimus ointment for the treatment of atopic dermatitis, up to 20 patients, 7/1/99 to 12/31/2000; budget = \$32,000.
65. Biogen, Protocol C99-711, A randomized double-blind comparison of intravenous LFA-3/TIP versus placebo in subjects with chronic psoriasis, 10 patients budgeted, 3 patients entered, 12/18/98 - 12/31/01; costs \$18,846/patient , total = \$56,538.
66. Biogen, Protocol C99-714, An open-label study to determine the tolerability and efficacy of repeat courses of LFA-3/TIP in subjects with chronic psoriasis who have previously completed the C978-708 or C98-709 study, 10 patients budgeted, 3 patients entered, 4/1/2000 - 3/31/01; costs \$6426/patient , total = \$19,278.
67. Genentech Inc Protocol ACD2058g, A phase III, randomized, double-blind study to evaluate the efficacy and safety of subcutaneously administered anti-CD11a in adults with moderate to severe plaque psoriasis, 20 patients budgeted, 7 patients entered, 2/7/2000 - 6/30/2002; costs \$16,993/patient, total = \$118,951.
68. Genentech Inc Protocol ACD2062g, An open-label, multidose, multicenter study to evaluate the safety and tolerability of subcutaneously administered anti-CD11a in adults with plaque psoriasis previously treated with anti-CD11a or placebo no more than 7 patients from forgoing (ACD2058g) study eligible ? patients entered, 8/1/2000 - 6/30/2002; costs \$4,400/patient, total = \$?????
69. ISIS Pharmaceuticals, Protocol 2302-CS14, A randomized double-masked, placebo-controlled, pilot study of the safety and efficacy of ISIS 2302 (ICAM-1) topical cream in patients with mild to moderate plaque -type psoriasis vulgaris, 12 patients budgeted, 2/14/2000 - 5/31/2001; costs \$5,682.50/patient, total = \$68,190.
70. Abgenix, Protocol ABX-0204, A two-part, multicenter, randomized, double-blind, placebo controlled, multiple dose, trial of ABX-IL8 in patients with moderate to severe plaque psoriasis, 5/16/2000 - 11/30/2001 budget is for 10 patients for each part of the study, costs \$13,781.25/patient, total = \$275,625.
71. Biogen, Univ of Utah Dept of Dermatology, and Univ of Utah GCRC, Reduction of CD45RO T lymphocytes as a predictor of improvement in psoriasis after treatment with methotrexate, 2/1/01 - 1/31/02 budget is for 25 patients, \$116,648.

72. Univ of Utah Dept of Dermatology (Movitz Foundation and GGK Gift Account), DNA Sciences, and the NPF, Familiality of psoriasis in Utah. 2/15/2001 – 10/31/2002, not with budget at this time (3/27/2001).
73. Univ of Utah Dept of Dermatology (Movitz Foundation and GGK Gift Account), Acitretin and commercial tanning bed combination therapy for patients with psoriasis, 2/1/2001 – 10/31/2001, budget \$18,000.
74. Immunex Inc, Double-blind randomized, placebo-controlled phase II study of Enbrel® (Etanercept) in the treatment of psoriasis, budget is for 10 patients, 10/1/2000 – 9/30/2001, \$41,657.
75. ISIS Pharmaceuticals, Protocol ISIS 104838-CS5, A randomized double-masked, placebo-controlled, pilot study of the safety and efficacy of ISIS 104838-CS5 (TNF- $\alpha$ ) topical cream in patients with mild to moderate plaque-type psoriasis vulgaris, 10 patients budgeted, 7/01/01 – 6/30/02; costs \$5896/patient, total = \$58,692.
76. Connetics, A multicenter study of Clobetasol foam vs cream in psoriasis; Protocol CPCD.C005, 5/1/01 to 12-/31/01, 20 patients, costs/pt \$1,842, total costs \$36,847.
77. Watson Therapeutics, A multicenter trial of antifungal patch/placebo patch for onychomycosis, Protocol AF01003 10/1/2001 – 12/31/2003, 16 patients, costs.pt \$2,986 total costs \$58,080.
78. Allergan, A multicenter long-term trial of Tazarotene for psoriasis, Protocol AGN 190168-050P, 10/1/01 – 5/31/03, 10 patients, costs/pt \$9,059, total costs \$109,494.
79. Fugisawa Healthcare, A pK trial of topical Protopic in pts with atopic dermatitis, Protocol FHI 01-0-100, 12 patients, cost /pt \$11,125, total cost \$152,429.
80. Novartis, A multi-center placebo controlled trial of topical picrolimus for atopic dermatitis CASM 981 US03, 6 patients, 8/15/01 – 12/31.02, cost/pt \$3,692, total cost \$24,188.
81. Fugisawa Healthcare, A pK trial of topical Protopic in pts with psoriasis, Protocol FHI 01-0-100, 12 patients, cost /pt \$14,132. total cost \$169,590.
82. Fugisawa Healthcare, A phase trial of topical Protopic in pts with psoriasis, Protocol FHI 01-0-126, 14 patients, cost /pt \$5,184, total cost \$72,478.
83. Immunex, A Phase 2 dose ranging trial for psoriasis using etanercept Protocol 0016.0039, 12 patients, cost /pt \$10,283, total cost \$123,400.
84. Immunex, A Phase 3 trial for psoriasis using etanercept Protocol 0016.0042, 10 patients, cost /pt \$5,593 total cost \$55,930.

#### **PRIVATELY FILED IND'S**

- PUVA experimental use in a community run psoriasis treatment center; 1975 to 1979
- Comparative trial of two different topical corticosteroid preparations (novel vs standard) for severe hand eczema; 1994-1995
- Comparative trial of clobetasol dipropionate in a cream vehicle applied twice daily with that of clobetasol dipropionate in a liposomal vehicle applied twice daily for the treatment of plaque psoriasis 1998-99

**ADMINISTRATIVE EXPERIENCE -- Appointments:**

- 7/1/72-7/1/77: Assistant Professor of Medicine, Division of Dermatology, Department of Internal Medicine, University of Utah School of Medicine, Salt Lake City, Utah
- 7/1/72-7/1/87: Head, Division of Dermatology, Department of Medicine, University of Utah School of Medicine, Salt Lake City, UT
- 7/1/77-6/30/82: Associate Professor of Medicine, as above.
- 7/1/82-6/1/96: Professor of Medicine, as above.
- 6/1/96-2/28/01: Professor of Dermatology, Department of Dermatology, University of Utah Health Sciences Center, Salt Lake City, Utah
- 7/1/84-Present: Adjunct Professor of Pathology, Department of Pathology, University of Utah School of Medicine, Salt Lake City, Utah
- 3/1/01 to Present Professor of Dermatology, Cumming Presidential Endowed Chair in the Department of Dermatology, University of Utah Health Sciences Center, Salt Lake City, Utah

**PROFESSIONAL COMMUNITY ACTIVITIES**

- Board of Councilors, Western Section of the Society for Investigative Dermatology, 1976-1978
- Board of Directors, American Dermatologic Society for Allergy and Immunology, 1978-1984
- Board of Directors, American Society of Professors of Dermatology, 1980-85.
- Board of Directors, National Ichthyosis Foundation, 1983-1992.
- Advisory Board, International Psoriasis Symposium, 1983-1990.
- President, American Dermatologic Society for Allergy and Immunology, 1983-84.
- Chairman, NIH committee to evaluate psoriasis research, present and future directions in 1984.
- GMA-1 Study Section of NIAMD of NIH, ad hoc member, 1980-82, permanent member, 1985-88
- National Psoriasis Foundation, Medical Advisory Board, 1985-current
- Chairman, Goals Committee, Association of Professors of Dermatology, 1985
- Board of Directors, Society for Investigative Dermatology, 1985-1988
- Co-Chairman for organizing the 1989 Deer Valley Psoriasis Workshop: Molecular, Immunologic and Pharmacologic Aspects of Psoriasis. Published as a supplement to J Invest Dermatol 95:1s-63s, 1990.
- Co-Chairman for organizing the 1991 Deer Valley Psoriasis Workshop: Immunogenetics of Psoriasis.
- Executive Committee, Dermatology Foundation, 1987 - current
- President, Dermatology Foundation, 1988-1991
- Medical Advisory Board, Pennederm, 1990 - 1996
- Scientific Advisory Board Iomed 1991 - 1997

- Aids Related Research -E (ARR-E) Study Section 1989 - 1993
- Member of the Research Advisory Council to NIAMS for the AAD 1991 - current
- Long Range Planning Committee for the AAD 1988 - 1993
- Visioning Committee of the AAD 1992
- National Psoriasis Foundation Tissue Bank Committee 1991 - current
- National Psoriasis Foundation, Chairman of the Medical Advisory Board, 1993 to current
- American Academy of Dermatology member Section of Health Policy, Practice, and Research, 1994-1998
- American Academy of Dermatology Chairman of Research Council, 1994-1999
- Chairman of Special Study Section of NIAMS for Skin Disease Research Centers, 11/8-10/93
- DeNovo Scientific Medical Advisory Board Dec 1994 to 1996
- Chairman of Special Study Section of NIAMS for grant review 9/25-26/94
- National Psoriasis Foundation, Non voting member of Board, 1994 to current (attend at least 2 Board meetings per year)
- Chairman for the Organizing Committee of the Leaders Society of the Dermatology Foundation 1997 to current.
- Site visit review of intramural research - Skin Branch of the NCI 9/30/97
- Co-Chair of PUVA Consensus Conference, WDC, 11/15-16/97
- Advisor to Skin Research Center, Case Western Reserve University, 7/1/98 to current.
- Chair of Special Study Section of NIAMS on Gene Therapy Aug 2001
- AAD Educational Summit Committee on Treatment for Psoriasis 2002 to current

**MEMBERSHIP IN PROFESSIONAL SOCIETIES - ACTIVE:**

- American Federation for Clinical Research
- Society for Investigative Dermatology
- American Academy of Dermatology
- Intermountain Dermatology Society
- American Society of Clinical Investigation
- American Dermatologic Association
- American Society for Gene Therapy
- National Psoriasis Foundation

**COMMITTEES : UNIVERSITY COMMUNITY ACTIVITIES**

**(not complete - selected - from 7/1/93)**

- Promotion Retention Tenure Committee - Three year term
- Search Committee - Dean, College of Pharmacy
- Promotion Retention Tenure Committee - A second three year term, August 1995 to July 1998

**INVITED PRESENTATIONS: UNIVERSITY COMMUNITY ACTIVITIES**

**(not complete - selected)**

1. CIRD Symposium, France, October 1983.
2. Toxicology Meetings, Stockholm, Sweden, 1985.
3. Skin Pharmacology Society Meeting, Boston, MA, August, 1985
4. American Academy of Dermatology, Chairman, Psoriasis Symposium, Las Vegas, NV December 1985.
5. CIRD Symposium, France September 1986.
6. 5th Korea-Japan Joint Meeting of Dermatology, Chonju Island, Korea, November 1987.
7. American Academy of Dermatology, Chairman, Psoriasis Symposium, December 1986 (New Orleans), 1987 (San Antonio), 1988 (Washington DC).
8. Advances in Psoriasis Treatment---A Continuum symposium, lecture " Biology of Psoriasis" 10/26-27/90, Santa Barbara, Ca.
9. Workshop on Linkage Analysis of Hereditary Skin Diseases; Lecture " Genetics of Psoriasis, an Update" 4/22-24/90, U of CA SF.
10. Derm 2000 lecture " Cytokines in skin disease" 5/22-26/90 London England.
11. Snowbird continuing education conference for PAs and Nurse practitioners, Aug 1990.
12. Dermatology Symposium--Kaiser Permanente 10/27/90 " Trade vs Generic Therapy--Real or Perceived Problems" Newport Beach Ca.
13. In vitro - Alternatives to topical testing Johns Hopkins University 4/3/91
14. Hair loss and the primary care physician, UUMC Int Med Conf, Snowbird, Ut. 7/8/91
15. Experimental models, 5th Psoriasis Conference, San Francisco, Ca 7/11/91
16. Models systems using human skin, @ 2nd topical workshop AAPS / FDA 12/3/91
17. Immunology of psoriasis @ basic immunology course AAD 12/8/91
18. Recalcitrant Psoriasis, an approach to management AAD 12/9/91
19. Home UVB debate - Yea or Nay, AAD 12/11/91
20. Bone Marrow Transplant --Dermatologists delight vs dilemma, Winter Skin Seminar 2/10/92
21. Gene Therapy, using cells of the skin, where are we? Winter Skin Seminar Aspen, CO 1/93.
22. Therapy for psoriasis via case studies, Winter Skin Seminar, Aspen, CO 1/93.
23. Psoriasis 1993 @ the Update in Internal Medicine - 1993, Park City, UT. Sponsored by the Dept of Med UUHSC.
24. Use of Genetically Modified skin to treat disease -- Potential vs. Limitations; Cutaneous Biology Symposium; July 1993, @ Aspen CO.
25. Pitfalls in Skin Disease and the Primary Care Giver -- How to Avoid Them, Physician Assistant and Nurse Practitioner Course, Snowbird UT, August 1993.
26. How I Treat Palmar / Plantar Psoriasis, American Academy of Dermatology Dec 1993.

27. Cutaneous Pain Syndromes, Winter Skin Colloquium, West Palm Beach, FL Jan 1994.
28. Cutaneous Pain Syndromes, Winter Skin Seminar, Vail, CO Feb 1994.
29. Retinoids for psoriasis National Psoriasis Foundation Seminar, San Francisco, Apr 1994.
30. Calcipotriene for psoriasis National Psoriasis Foundation Seminar, San Francisco Apr 1994.
31. Chairman of special poster session on psoriasis, Soc. Invest. Derm. Mtg. Apr 1994
32. Site visit to National Psoriasis Foundation Tissue Bank May 1994
33. Chairman of Plenary session @ VI International Psoriasis Conference, Chicago IL, on Genes to Gene therapy, gave introduction and presentation on use of skin to correct disease.
34. Cutaneous Pain Syndromes @ Summer meeting of the American Academy of Dermatology 1994.
35. Rotational and combination therapies for moderate to severe psoriasis @ Systemic therapy for psoriasis, consensus conference, Deer Valley UT, 10/7-9/94
36. Newer topical therapies for mild to moderate psoriasis, @ Winter Skin Seminar 3/12-17/95.
37. Rotational and combination therapies for moderate to severe psoriasis, @ Winter Skin Seminar 3/12-17/95.
38. The use of genetically modified skin to treat disease: Feasibility studies, @ Third annual Weber Immunology Retreat, 6/24/95
39. Gene Therapy / Cells of the Skin / Potential --- Limitations, @ the Toronto Dermatology Society, Toronto, Ontario, 9/21-22/95.
40. Apoptosis - its significance in disease and therapeutic implications, @ Winter Skin Seminar, 1/15/96.
41. The use of genetically modified skin to treat disease, @ Winter Skin Seminar, 1/18/96
42. Psoriasis - Update on the pathogenesis and new and evolving treatments @ Winter Skin Seminar, 2/2/97
43. Problem Cases: Management Decisions @ Psoriasis Forum of the American Academy of Dermatology Convention, 3/21/97, San Francisco CA
44. Gene Therapy / Cells of the Skin / Potential @ class run by Pat Tresco in Bioengineering U of U, 5/9/97
45. Gene Therapy of Skin - the Challenge: Survival of Genetically Modified Cells in vivo @ Keystone Symposia Conference in Tissue Engineering 1/10/98 - 1/15/98, Copper Mountain Co
46. Update on Cutaneous Pain Syndromes, @ Winter Skin Seminar, 2/98
47. New Treatments for Skin Disorders: From Baldness to Eczema, @ Winter Skin Seminar, 2/98
48. Transgene expression by cells of the skin in vivo: Lessons learned. @ Wound Healing Society; Salt Lake City, 6/19/98

49. Targeting CD2 for immunotherapy: results of a phase 1b/2a trial with LFA3/IgG fusion proteint in moderate to severe psoriasis @ International Psoriasis Symposium, Milan Italy 9/2-5/98
50. Delivery of transgenes to the intact epidermis - the hope and the reality @ the Sixth International Conference on Perspectives in Percutaneous Penetration; Leiden, Netherlands 9/22-26/98
51. Update on cause and treatment of psoriasis for the American Skin Association @ the New York Academy of Sciences 10/7/98
52. The basis for the immunopathogenesis of psoriasis, FDA/CEBR, Oct 21-22, 1998 Washington DC
53. Research on psoriasis where is it going and what value is it, 30th Anniversary Gala Dinner of the National Psoriasis Foundation, New York City, 10/23/98
54. Chair panel discussion of psoriasis - meet the experts at patient meeting of the NPF on 10/24/98
55. Three talks, a) Update on topical and systemic treatment for psoriasis; b) Cutaneous Pain Syndromes; c) Update on the pathogenesis of psoriasis, Nov 6-7, 1998 for the New Mexico Dermatology Society
56. Update on treatments for psoriasis 9/17/99 Intermountain Dermatology Society, Sun Valley Idaho
57. Psoriasis therapy in the new millennium and their impact on other skin disease, Winter Skin Seminar, Snowbird UT Jan 31, 2000
58. Fibroblasts and dermal gene therapy, at the NIAMS sponsored workshop Cutaneous Gene Therapy: Problems and Prospects, March 23 - 24, 2000
59. An update on the pathogenesis of psoriasis, Tri-county Derm Society, Santa Barbara, CA April 24, 2000
60. Therapeutic considerations in the treatment of psoriasis, Tri-county Derm Society, Santa Barbara, CA April 24, 2000
61. An update on the pathogenesis of psoriasis, Wyoming Academy of Dermatology, Pinedale WY, June 16, 2000
62. Therapeutic considerations in the treatment of psoriasis, Wyoming Academy of Dermatology, Pinedale WY, June 16, 2000
63. Overview of new immune response modifiers to treat psoriasis: An example, treating psoriasis by inhibiting the CD2/LFA3 co-stimulatory pathway with Amevive, Japanese Society for Psoriasis Research, Fukushima, Japan Sept 6-10, 2000
64. " My chair-raising experience" for Fund Raising 101 1/12/01
65. 10 Top Advances @ Winter Skin Seminar Jan 31/Feb 1, 2001
66. Psoriasis – a T cell mediated disease: three approaches to treatment March 16 and May 25, 2001 (2 parts) to dermatology staff, Univ of Utah
67. New treatment approaches to psoriasis: the emerging importance of pharmacogenomics, National Psoriasis Foundation Genetics Consortium Meeting in Stockholm, May 18, 2001.
68. Presentations at May 2001 SID, 4 posters and 1 platform presentation



69. Presentations / activities at June International Psoriasis Symposium June 2001, 3 posters, 3 platform presentations, chair one satellite symposium and chair 2 plenary sessions.
70. "Immunomodulatory agents for psoriasis Summer AAD in Anaheim CA July 31, 2001.
71. "Mechanism of action of topical glucocorticosteroids in skin disease" for CME article that is to be generated from a educational grant by Connetics to Synermed, Denver CO, Aug 4 and 5, 2001.
72. Two presentations, New biologics for the treatment of psoriasis and Psoriasis case studies at the National Psoriasis Foundation Chief Resident Meeting San Antonio Tx Sept 8-9, 2001.
73. The challenge of using genetically modified fibroblasts a vehicle for gene therapy, at the Gene Therapy Conference sponsored by the ESDR, Uppsala Sweden, Sept 18-20, 2001.
74. "Psoriasis therapies: assessment of endpoints, Tularik Inc So San Francisco, Oct 8, 2001.
75. "Alefacept phase III trial, IV component, for psoriasis" at a satellite symposium of the EADV Oct 11, 2001, Munich Germany.
76. "New pathogenesis driven treatment approaches for psoriasis", Medical Grand Rounds Oct 18, 2001. Univ of Utah.
77. "New effective and available treatments for psoriasis", invited lecture sponsored by Roche for dermatologists in Utah, Oct 18, 2001, SLC Utah.
78. Antisense in dermatology a new platform for treating diseases of the skin, invited lecture at the Weston Fest a series of lectures by colleagues and trainees of W L Weston at his retirement Nov 3, 2001.
79. Antisense – an emerging platform to genome base therapy, invited lecture at the American Dermatologic Association meeting Nov 10, 2001.
80. Methods for assessment of response to treatment in patients with psoriasis – emphasis on PASI, Enbrel® Investigators meeting Miami Beach, FL Dec 8, 2001.
81. Methods for assessment of response to treatment in patients with psoriasis – emphasis on PASI, Serono Investigators meeting Los Angeles Dec 6, 2001.
82. Methods for assessment of response to treatment in patients with psoriasis – emphasis on PASI, Serono Investigators meeting Prague CZ Dec 12, 2001.
83. "Immunomodulatory therapy for skin disease: rationally based targets, psoriasis as the prototype," an invited presentation for the first internet conference entitled "International Pharmacology Dermo Therapy in Rome Dec 15, 2001 access via web site [www.dermo-therapy.com](http://www.dermo-therapy.com)
84. Gene Therapy from Hype to Hope to Despair to Hope, Winter Skin Seminar 1/27/02.
85. Selected Update on Psoriasis: Genes to New Rx Winter Skin Seminar 1/29/02.
86. New biologics for skin disease: mechanism of action to pathogenesis of disease, AAD New Orleans 2/23/02.

87. Management of Difficult Patients @ Psoriasis Symposium AAD New Orleans 2/25/02.
88. Overview for Therapeutics Session of the SID, 5/17/02.
89. Chaired and gave presentation on Potential of Use of Genetically Modified Fibroblasts to Treat Disease to Session of the American Society for Gene Therapy meeting in Boston 6/5/02.
90. Two presentations 1. What is happening inside, understanding the immune system and new treatments for psoriasis and 2, Current systemic treatments for psoriasis; National Psoriasis Foundation Patient Conference Orlando FL, Aug 10-11, 2002.
91. A new era: rationally based treatments for inflammatory skin disease: Psoriasis as the prototype; Intermountain Dermatology Meeting, Sun Valley Idaho Sept 20, 2002.
92. New biologics for the treatment of psoriasis; National Psoriasis Foundation Chief Resident Meeting La Jolla CA, Sept 21, 2002.
93. Systemic Rx for Psoriasis Old and What is Coming, American College of Rheumatology, New Orleans Oct 28-29, 2002.
94. Alefacept for Psoriasis, at the Educational Summit of the American Academy of Dermatology, Nov 1-3, 2002.
95. Gene Therapy Using Cells of the Skin at the Dermatology Foundation/Unilever Symposium Nov 10-11, 2002.

**VISITING PROFESSORSHIPS : UNIVERSITY COMMUNITY ACTIVITIES (1983 to present)**

1. University of Colorado School of Medicine, Department of Dermatology, Denver, Colorado, March 1983.
2. University of Illinois College of Medicine, Department of Dermatology, Chicago, IL, May 1983.
3. Allergan/Herbert Laboratories, Division of Research and Development, Irvine, CA, August 1983.
4. University of Michigan Medical School, Department of Dermatology, Ann Arbor, MI, March 1984.
5. Columbia Presbyterian Hospital, Department of Dermatology, New York, NY, November 1984.
6. Rydelle Laboratories Lectureship, Department of Dermatology, University of California at San Francisco, San Francisco, CA, December, 1984.
7. University of Illinois Medical School, Department of Dermatology, Chicago, IL, March 1985.
8. Uniformed Services University of the Health Sciences, Departments of Medicine And Pharmacology, Bethesda, MD, October 1985
9. Ortho Pharmaceutical Corporation, Division of Clinical Research, Raritan, New Jersey November, 1985.
10. Procter and Gamble Lectureship, University of Cincinnati Medical Center, Department of Dermatology, Cincinnati, Ohio, January, 1986.

11. Rydelle Laboratories Lectureship, Division of Dermatology, UCLA School of Medicine, Los Angeles, CA, March, 1986.
12. Roche Laboratories Visiting Lectureship, Department of Medicine, University of Louisville, Louisville, KY, April 1986.
13. Howard Fox Guest Lectureship, Department of Dermatology and Skin and Cancer Unit, New York University Medical Center, New York, NY, May 1986.
14. Roche Laboratories Visiting Lectureship, Department of Dermatology, University of Iowa, Iowa City, IA, November, 1986.
15. University of California at San Francisco, Department of Dermatology, San Francisco, CA, January, 1987.
16. Harvard University Medical School, Department of Dermatology, Boston, MA, April 1987.
17. Yale University Medical School, Department of Dermatology, New Haven, CT, May 1988.
18. New Mexico Dermatology Society, Santa Fe, New Mexico, September 1988.
19. Columbia University School of Medicine, Department of Dermatology, New York, NY, April 5-7, 1989.
20. University of Colorado / Colorado Dermatologic Society, Denver, Colorado, June 1989.
21. Univ of Minnesota 3/13-24/90 " What treatment has told us about the pathogenesis of psoriasis" .
22. Univ of Pittsburgh June, 1990 Psoriasis treatment, an update.
23. Univ of Calif San Diego, Aug 1990 Retinoids in malignant and premalignant skin conditions.
24. Univ of Colorado, 11/6/90 " Applied aspects of cutaneous pharmacology" .
25. Univ of Texas Southwestern, 4/22-23/91 " Immunology of psoriasis and topic of choice" .
26. Emory Univ / Atlanta Dermatologic Assoc - Quarterly Meeting (8/92) Harold Melter lectureship; 1. Psoriasis Rx, 2. BMT TX, 3. Topical Pharmacology.
27. Mount Sinai College of Medicine (10/92) " Treatment of Psoriasis; Pathogenesis of Psoriasis, Current Concepts" .
28. University of Illinois Dept of Biochemistry, " The Challenge of Gene Therapy Using Cells of the Skin" , Jan 27 - 28, 1997.
29. Mount Sinai College of Medicine, Department of Dermatology, " Cutaneous Pain Syndromes" , and " Immunopathogenesis of psoriasis" Feb 27, 1997.
30. Stanford University Dept of Dermatology 1. " Treatment of Psoriasis; Pathogenesis of Psoriasis, Current Concepts" , 2. " Cutaneous Pain Syndromes" . May 13, 1997.
31. Case Western Reserve Department of Dermatology, review of Center Grant, Nov 24, 1998.
32. UCLA Two lectures dinner meeting "New Treatment Options for Psoriasis" formal grand rounds Psoriasis - How Advances in Understanding are Leading to New Treatments, August 7 and 8, 2000.

33. University of Colorado two lectures: The challenges and opportunities of using genetically modified fibroblasts in gene therapy; An update on the pathogenesis and therapeutic considerations in the treatment of psoriasis, Denver CO, Oct 2, 2000.
34. Univ of Southern Calif, April 11, 2001, Considerations in and an update of treatment for psoriasis.
35. Loma Linda University, April 12, 2001, Considerations in and an update of treatment for psoriasis.
36. New York University, June 1, 2001, Use of genetically defined skin to treat skin disease; Focus: genetically modified fibroblasts.
37. Univ of Oregon April 3, 2002, New Era Immunomodulatory therapies, Ps and PsA as the prototype.
38. Univ of Colorado May 6, 2002, New Era Immunomodulatory therapies, Ps and PsA as the prototype.
39. Mt Sinai University, NYC May 29, 2002, Two presentations: New Era Immunomodulatory Therapies for Skin Disease and Selected Update on Psoriasis: Genes to New Rx.
40. Loma Linda University Sept 3, 2002 Immunomodulatory Therapies for Skin Disease: Psoriasis as the Prototype.
41. University of Cincinnati Oct 9-10, 2002 Immunomodulatory Therapies for Skin Disease: Psoriasis as the Prototype.
42. University of California San Francisco Oct 22-23, 2002 Immunomodulatory Therapies for Skin Disease: Psoriasis as the Prototype.
43. University of Louisville Oct 31-Nov 1, 2002 Immunomodulatory Therapies for Skin Disease: Psoriasis as the Prototype.
44. Johns Hopkins University Nov 3-4, 2002 Immunomodulatory Therapies for Skin Disease: Psoriasis as the Prototype.
45. University of Alabama Nov 12-13, 2002 Immunomodulatory Therapies for Skin Disease: Psoriasis as the Prototype and Gene Therapy Using Cells of the Skin.

**UNIVERSITY COMMUNITY ACTIVITIES (1994 to present) Not Lectures**

- Lobby for NIAMS funding -- testimony to Senator Harker's committee 3/2/94 on behalf of AAD.
- Lobby for NIAMS funding -- multiple visits to Capitol Hill to Congressional Staff 3/7/94 on behalf of AAD.
- Testimony to House Appropriations Subcommittee Chairman Porter R Illinois, 1/24/95 on behalf of AAD
- Participant in founding of the Coalition Council for Research in Dermatology 1/23/95 on behalf of AAD
- Co-Chair for lobbying effort for NIAMS funding -- multiple visits to Capitol Hill to Congressional Staff 1/20/96 -- 4/15/96 on behalf of specialties and patient advocate groups represented in the NIAMS.
- **Project Awareness for Dermatology Foundation**
  - Loma Linda Univ May 2001

- Univ Oregon, April 2002
- Derm Resident Retreat June 2002
- Case Western Reserve July 2002
- University of Cincinnati October 2002
- University of Louisville October 2002
- Johns Hopkins University November 2002
- University of Alabama November 2002
- SUNY Brooklyn June 2003
- Wake Forrest June 2003

**CONSULTANT (from June 1990)**

- FDA, Aug 1990
- Marrow-Tech, Aug 1990
- CFTA, Sept 1990
- Iomed, Feb 1991
- Chiron, April 1991
- Abbott, May 1991
- Schering, July 1991
- Kolomar, Nov 1991
- Steifel, Nov 1991
- NIH NIAMS, Therapeutic trials panel Jan 1992
- Biogen, Jan 1992
- Reed Carnrick April 1992
- Sandoz May 1992
- Allergan Herbert Sept 1992
- Bristol Meyers/Squibb Oct 1992
- Smith Kline/Beecham Nov 1992
- Genta June 1992 to 1996
- Biogen Inc., Mar 1993
- UniLever Apr 1993
- Genta, Jan - June 1995
- Procter and Gamble, July 1995
- UniLever @ Bedford, UK Oct 1995
- Merck Research, Dec 1995
- DUSA, 1996 to current
- Ciba/Geigy July 1996
- Sandoz June 1996
- Abgenix 1997 to 1999
- Procter and Gamble July 1998
- FDA/CEBR Oct 1998

**LONG TERM / RETAINED / SHAREHOLDER / CONSULTANT**

- Smith Kline/Beecham Consultant on intermittent basis 1992 to 1997
- PeneDerm, Scientific Medical Advisory Board, May 1990 to 1996
- TheraTech 1996 to current
- Dermigen Scientific Advisory Board Feb 1997 to 2000
- Biogen 1997 to current
- Vertex August 1996 to current
- Xcyte Therapies Inc (formerly CDR) Consultant (Shareholder) 1996 to current
- Connetics Nov 98 to current
- ZARS March 99 to current
- Abgenix Jan 1999 to current
- 'elan Aug 1999 to 2000
- Fujisawa Healthcare June 2000 to current
- Isis (Retainer) Sept 1999 to 2002
- Isis 2002 to current
- Berlex Jan 2000 to current
- DermTech International Dec 2000 to current
- Gerson Lehrman Mar 2000 to current
- PowderJect Mar 2001 to current
- Amgen / Immunex / Wyeth-Ayrest Feb 2001 to current
- Glaxo-SmithKline Feb 2001 to current
- Serono Oct 2001 to current
- SkyePhama Feb 2002 to current
- Centecor April 2002 to current
- MedaCorp June 2003 to current
- Boehringer Ingleheim May 2003 to current

#### **TEACHING RESPONSIBILITIES**

- Physical Diagnosis of Skin, 100 second year medical students each year 1972 - 1992
- Skin Research elective for 4th year medical students 2 / year
- Clinical Dermatology for 4th year medical students ( 30 / year) and internal medicine residents ( 12 / year) in 4 clinics per week.
- Ward and Clinic attending for dermatology residents
- Four clinics per week -- average of 1 resident and 2 students per clinic

#### **THESIS COMMITTEE (NOT A COMPLETE LIST)**

Jen Yu Wie, 1987, Dept of Physiology  
Scott W Smith, 1992, Dept of Pharmaceutics  
Steve Geigy, 1995, Dept of Toxicology  
Sharon Cahoon 1996, Dept of Anatomy  
Deanna Hubbard 1998, Dept of Toxicology

#### **POST DOCTORAL BASIC AND CLINICAL RESEARCH FELLOWS**

1. Amos Gilhar MD 1986 – 1988: Project = Studies on Alopecia Areata; Now on faculty at Technology Institute, Haifa, Israel.
2. Kenneth J Miller II PhD 1991- 1993: Project = Proof of Principle Studies of Antisense Oligonucleotides Applied Topically to Human Skin. He left to become Senior Scientist @ Noven Pharmaceuticals, then joined the Dept of Derm of Univ of Arkansas and most recently joined Bertack Pharmaceuticals.
3. Linda Lieb PhD 1994 – 1996: Project = Definition of Pathway of Absorption of Large Molecules When Applied to Hair Bearing Human Skin Junior. She was on the Faculty Dept of Derm Univ of Utah for 1.5 years and now is at Fujisawa Pharmaceuticals.
4. Margarita O' Reilly 1995 – 1997: Project = Clinical Trials Research Fellow; currently in residency in Dermatology Univ of Utah.
5. Payam Tristani MD 1997-1999: Project = Clinical Trials Research Fellow; currently in residency in Dermatology Univ of Utah
6. Kappa Meadows MD 1999-2000: Project = Assessment of the Utility of Using Genetically Modified Langerhans Cells to Correct Disease; she will leave to enter practice in Virginia in July of 2000
7. Michael Gifford MD 1999 – 2000: Project = Clinical Trials Research Fellow; he will leave to enter residency in dermatology at the Univ of Michigan in July of 2000
8. Jeff McKenna MD 1999-2000: Project = Effect of Locally Generated Heat on Permeation of Drugs Into Human Skin: he will enter residency in dermatology at the Univ of Utah
9. Kristina Callis MD 2000-2002: Project = Clinical Trials Research Fellow
10. Christopher B Hansen MD 2002-2003: Project = Utah Psoriasis Initiative
11. Christopher Carlin MD 2002-2003: Project = Clinical Trials Research Fellow
12. Julie A Maughan MD 2003-2004: Project = Clinical Trials Research Fellow
13. Jason Papenfuss MD 2003-2005: Clinical Research Fellow, Project = Phenotyping for UPI
14. Clive Liu MD 2003-2004: Clinical Research Fellow, Project = Evaluation of EGIR and hair roots for message as a function of diagnosis and response to treatment
15. Mark Herron MD 2003-2004: Clinical Research Fellow, Project = Assessment of obesity on psoriasis

#### **PUBLICATIONS, PEER REVIEWED**

1. Nelson JC, Krueger GG, Wilcox RB, Thompson W: The effect of radiocontrast media on the measurements of adrenal steroids in urine. J Endo Metab 28:1515-1517, 1968.

2. Krueger GG, Molk L, Kahn G: The exacerbation of atopic eczema by retinoic acid. *Arch Dermatol* 105:405-406, 1972.
3. Weston WL, Mandel JM, Krueger GG, Claman NH: Differential suppression of macrophages and lymphocytes by cortisol in tuberculin skin reactions. *J Invest Dermatol* 59:345-348, 1972.
4. Koehn G, Thorne EG, Krueger GG, Weston WL: Urticaria in HAA positive hepatitis. *Cutis* 10:705-708, 1972.
5. Mandel MJ, Carr RI, Weston WL, Krueger GG, et al: Anti-native DNA antibodies in discoid lupus erythematosus. *Arch Dermatol* 106:668-670, 1972.
6. Krueger GG, Weston WL, Mandel MJ, Kahn G: IgE levels in nummular eczema. *Arch Dermatol* 107:56-58, 1973.
7. Krueger GG, Weston WL, Thorne EG, Mandel MJ, Jacobs RJ: A phenomenon of macrophage aggregation activity in sera of patients with exfoliative erythroderma, erythema multiforme, and erythema nodosum. *J Invest Dermatol* 60:282-285, 1973.
8. Weston WL, Krueger GG, Claman NH: Site and mechanism of action of cortisol in cell-mediated immune response. *J Immunol* 110:880-883, 1973.
9. Weston WL, Krueger GG, Mandel MJ, Yeckley JA, Claman HN: Mechanism of cortisol inhibition of adoptive transfer of tuberculin sensitivity. *J Lab Clin Med* 82:366-371, 1973.
10. Manning DD, Krueger GG: Use of cyanoacrylate cement in skin grafting congenitally athymic (nude) mice. *Transplantation* 18:380-383, 1974.
11. Yeckley G, Weston WL, Thorne EG, Krueger G: Production of Sezary-like cells from normal human lymphocytes. *Arch Dermatol* 111:29-32, 1975.
12. Krueger GG, Manning DD, Malouf J, Ogden B: Long-term maintenance of psoriatic human skin on congenitally athymic (nude) mice. *J Invest Dermatol* 64:307-312, 1975.
13. Christian G, Krueger GG: Clindamycin versus placebo as adjunctive therapy in moderately severe acne. *Arch Dermatol* 11:997-1000, 1975.
14. Krueger GG, Ogden BE, Weston WL: In vitro quantitation of cell-mediated immunity by nitroblue tetrazolium (NBT). *Clin Exp Immunol* 23:517-524, 1976.
15. Zirker DW, Krueger GG, Meikle AW: Percutaneous absorption of dexamethasone estimated by a plasma radioimmunoassay. *J Invest Dermatol* 66:376-378, 1976.
16. Voorhees JJ, Chambers DA, Duell EA, Marcelo CL, Krueger GG: Molecular mechanisms in proliferative skin disease. *J Invest Dermatol* 67:442-450, 1976.
17. Krueger GG, Bray PF: Familial localized panatrophs: An iatrogenic phenocopy secondary to steroid injection. *J Pediatr* 89:682-683, 1976.



18. Hill HR, Williams PB, Krueger GG, Janis B: Recurrent staphylococcal abscesses associated with defective neutrophil chemotaxis and allergic rhinitis. *Ann Intern Med* 85:39-43, 1976.
19. Spruance SL, Overall JC Jr, Kern ER, Krueger GG, Pliam V, Miller W: The natural history of recurrent herpes simplex labialis. Implications for antiviral therapy. *N Engl J Med* 287:69-75, 1977.
20. Sontheimer RD, Garibaldi RA, Krueger GG: Stevens-Johnson syndrome and its association with *Mycoplasma pneumoniae* infections. *Arch Dermatol* 114:241-244, 1978.
21. Krueger GG, Hill HR, Jederberg WW: Inflammatory and immune cell function in psoriasis - a subtle disorder. I. In vivo and in vitro survey. *J Invest Dermatol* 71:189-194, 1978.
22. Krueger GG, Jederberg WW, Ogden BE, Reese DL: Inflammatory and immune cell function in psoriasis. II. Monocyte function, lymphokine production. *J Invest Dermatol* 71:195-201, 1978.
23. Barbour AG, Krueger GG, Feorino PM, Smith CB: Kawasaki-like disease in a young adult. Association with primary Epstein-Barr virus infection. *JAMA* 241:397-398, 1979.
24. Ogden BE, Krueger GG, Hill HR: Lymphocyte suppressor activity in atopic eczema. *Clin Exp Immunol* 35:269-275, 1979.
25. Spruance SL, Krueger GG, MacCalman J, Overall JC Jr, Klauber MR: Treatment of recurrent herpes simplex labialis with levamisole. *Antimicrob Agents Chemother* 15:662-665, 1979.
26. Krueger GG, Jederberg WW: Alteration of HeLa cells growth equilibrium by supernatants of peripheral blood mononuclear cells from normal and psoriatic subjects. *J Invest Dermatol* 74:148-153, 1980.
27. Olmstead AD, Zone JJ, LaSalle BA, Krueger GG: Immune complexes in the pathogenesis of hypergammaglobulinemic purpura. *J Am Acad Dermatol* 3:174-179, 1980.
28. Krueger GG, Chambers DA, Shelby J: Epidermal proliferation of nude mouse skin, pig skin, and pig skin grafts: Failure of nude mouse skin to respond to the tumor promoter 12-O-tetradecanoyl phorbol 13-acetate (TPA). *J Exp Med* 152:1329-1339, 1980.
29. Huff JC, Krueger GG, Overall JC Jr, Copeland J, Spruance SL: The histopathological evolution of recurrent herpes simplex labialis. *J Am Acad Dermatol* 5:550-557, 1981.
30. Gurish MF, Roberts LK, Krueger GG, Daynes RA: The effect of various sunscreen agents on skin damage and the induction of tumor susceptibility in mice subjected to ultraviolet irradiation. *J Invest Dermatol* 76:246-251, 1981.

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### ARTICLES FOR PATIENT INFORMATION

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1. J Invest Dermatol " In This Issue" Feb 1999
2. J Invest Dermatol " In This Issue" Feb 2000

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1. Experimental and Clinical Photoimmunology, Vol. II, Daynes RA, and Krueger GG (editors), CRC Press, Boca Raton, Florida, 1983.
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### PATENTS

- " METHODS OF TESTING THE REACTION OF VARIOUS SUBSTANCES ON LIVING HUMAN SKIN" This patent describes what we have come to call the Rat Human Skin Sandwich Flap (RHSSF).

Patent # 4,677,968

Date of patent : 7/7/87

Inventor: Gerald G. Krueger

Assignee: University of Utah Research Foundation